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Taxonomic Notes on *Bryaxis koltzei* (Reitter) and its Allied New Species from Japan (Coleoptera, Pselaphidae)¹⁾

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Abstract. *Bryaxis coreanus* Nomura & Lee described from South Korea is newly synonymized with *B. koltzei* (Reitter), and its allied new species *kintaro* and a new subspecies *kintaro odaiensis* are described from Japan.

The pselaphid beetle, *Bryaxis coreanus* Nomura & Lee from South Korea is newly synonymized with *B. koltzei* (Reitter) known from Vladivostok in the Far East Russia, and a close new species and its new subspecies are described from Japan in this paper. These pselaphids constitute a distinct species group in the subgenus *Bythoblethus* Reitter of the genus *Bryaxis* Kugelann by having the large body, well projected secretory nodule at subapical part of the first antennal segment, the subglobose second antennal segment and the densely punctate pronotum.

Before going further, I wish to express my special thanks to Mr. S. A. Kurbatov (Moscow) for his kind advice and giving the valuable materials.

Bryaxis koltzei (Reitter)

Bythinus koltzei Reitter, 1887, Deuts. ent. Zeitschr., 31(1): 269.

Bryaxis koltzei: Raffray, 1904, Ann. Soc. ent. Fr., 73: 280; Raffray, 1908, Col., Psel., Gen. Ins.: 277; Raffray, 1911, Psel., Coleopt. Cat., (27): 117; Löbl, 1973, Ann. Zool. Warszawa 30 (9): 325; Kurbatov, 1989, Psel., In Keys Ident. Ins. Russ. Far East, Vol. 1, Col., Part 1: 356.

Bryaxis coreanus Nomura & Lee, 1992, Esakia, Fukuoka, (32): 70; Nomura & Lee, 1993, Esakia, Fukuoka, (33): 31. **syn. nov.**

Distribution. Russia (Primorskii), North Korea, South Korea including Cheju Is.

Specimens examined: 2 males, Ussuriyskiy Zapov., okr. 1 Kordona, 14 vii. 1987, S. Kurbatov

1) Contribution from the Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka (Ser. 4, No. 82).

leg.; 2 males 1 female, Ussuriyskiy Zapov., Nijnyeye Tyechyeniye, r. Malaya Komarovka, 18. vii. 1987, S. Kurbatov leg.; 1 male, Ussuriyskiy Zapov., Salvkikova pad, 15. vii. 1987, S. Kurbatov leg.; 1 male, 40km SO of Ussuriyska, okr. dyer. Kamyenusuka, 7. vii. 1987, S. Kurbatov leg.; 2 females, Kyedrovaye pad Zapov., Primorskii, 6-8. ix. 1964, S. Tsemej leg.; Type series and specimens collected from South Korea under the name, *B. coreanus* in Nomura & Lee (1992, 1993).

Remarks. This species is characterized by the large body, the apically broadened secretory nodule on the thickened 1st antennal segment, the subglobose 2nd segment with a long and curved seta and the rugose pronotum.

In this species, the endophallus of the male genitalia is composed of two pairs of slender spines ("three spines" in Nomura & Lee, 1992 should be emended), spines of each pair are connected by the sclerotized lamelle and these four spines are fused at base. The feature of this species in the spines is represented by the long and weakly bent right pair and the short and strongly twisted left pair at the apical part.

***Bryaxis kintaro* sp. nov.**

Heteromorphous male. Length 1.9 mm. Width 0.8 mm.

Body reddish brown and shiny, broadened posteriorly.

Head about as long as wide, narrowed in anterior part, coarsely punctate, clypeus short, arcuately expanded anteriorly, frons strongly convex at bases of antennae, concave and glabrous at middle part, with an acute projection between antennae, vertex convex, with a weak longitudinal carina and a pair of dorsal tentorial pits between eyes, postgenae almost flat, densely pubescent. Eyes small and ovoid, each composed of about 30 facets. Antennae short and robust, 1st segment largest, nearly ovoid, with a secretory nodule at inner side of its apex, secretory nodule strongly broadened apically, truncate at apex, 2nd nearly subglobose, weakly thickened on basal part, with a long and curved seta on inner side, 3rd to 4th each small and ovoid, longer than wide, 5th to 8th subglobose, 9th to 11th thickened, 9th slightly transverse, 10th about as large as 2nd, transverse, 11th slightly narrower than 1st and ovoid, about 1.4 times as long as wide. Maxillary palpi each shorter than antenna, 1st segment short, 2nd long and slender, thickened apically, 3rd short, slightly narrower than 2nd, 4th largest, 2.4 times as long as wide.

Pronotum slightly wider than long, widest at anterior 3/7, covered with round, coarse and separate punctures, distant from each other by its own diameter, with a transverse sulcus at posterior 1/5 on its median part, a pair of basilateral foveae at posterior 1/4 and 2 pairs of suberect hairs on both sides. Elytra about as long as wide, weakly broadened posteriorly, shallowly concave at base and weakly convex on dorsal part, covered with coarse and sparse punctures, humeri convex, each elytron with 2 basal foveae on basal concavity and a longitudinal sulcus running from the basimedial fovea. Legs short and robust, fore tibiae each with an emargination at apical 1/5 on inner side, hind tibiae each with an acute mucro at inner side of its apex.

Abdomen very short, about half as long as elytra in dorsal view, each abdominal segment transverse, 9th abdominal sternite composed of 3 plates, lateral plates paired, each broad and

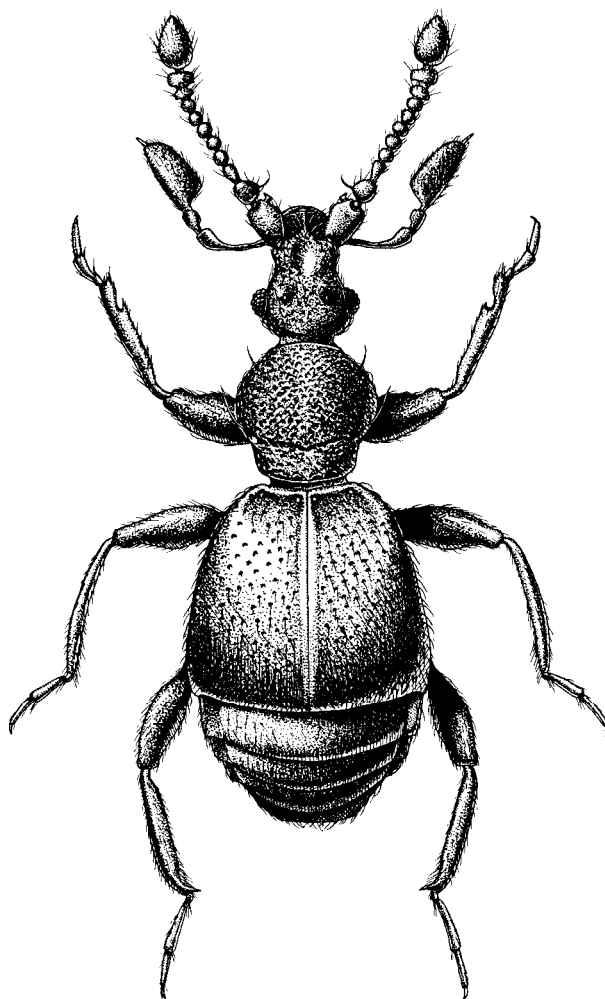


Fig. 1. Dorsal aspect of the male of *Bryaxis kintaro odaiensis* subsp. nov.

trapezoid, median plate articulated with lateral plates at their subapical part, very small and ovoid.

Male genitalia symmetrical and ovoid, parameres paired, each broad at base, gently narrowed apically, dorsomedian margin weakly bisinuate, median lobe ovoid, with a small and transverse basal foramen, endophallus consisting of basally connected 2 pairs of slender spines, right pair reaching apical parts of parameres, strongly twisted in basal half, left pair shorter than right, reaching base of left paramere, both spines crossed or connected at apex, each slightly arcuate or straight and acute at apex.

Homomorphous mule. Length 1.8 mm. Width 0.7 mm. Similar to heteromorphous male, but body smaller, legs more slender, especially in femora.

Female. Length 1.6-1.7 mm. Width 0.7 mm. Similar to homomorphous male, First antennal segment tubular, 2.2 times as long as wide, fore tibia slender and straight, without emargination.

Distribution. Japan: Honshu (Tohoku to Chubu districts).

Holotype, homomorphous male (Type No. 2994, Kyushu Univ.), Suketsune-rindo, Iidate-mura, Fukushima Pref., 21. vii. 1985, S. Nomura leg. Paratypes: 2 homomorphous males, 1 female, same data as holotype; 1 heteromorphous, 1 homomorphous males, 4 females, Oirase, Shirakami, Aomori Pref., 8. viii. 1987, S. Nomura leg.; 2 homomorphous males, 2 females, Tanihama, Joetsu C., Niigata Pref., 29. iii. 1981, K. Baba leg.; 1 female, Noo, Niigata Pref., 6. iv. 1981, K. Baba leg.; 2 homomorphous males, Asahi super-rindo, Asahi-mura, Niigata Pref., 24. x. 1990, H. Koike leg.

Remarks. This new species is very similar to *B. koltzei* in general aspect, but is separated by the following characters: the dorsal surface of the pronotum is densely covered with coarse and round punctures (rugose in *koltzei*); the endophallus of the aedeagus has the strongly twisted right pair of spines and the short and slightly arcuate left pair.

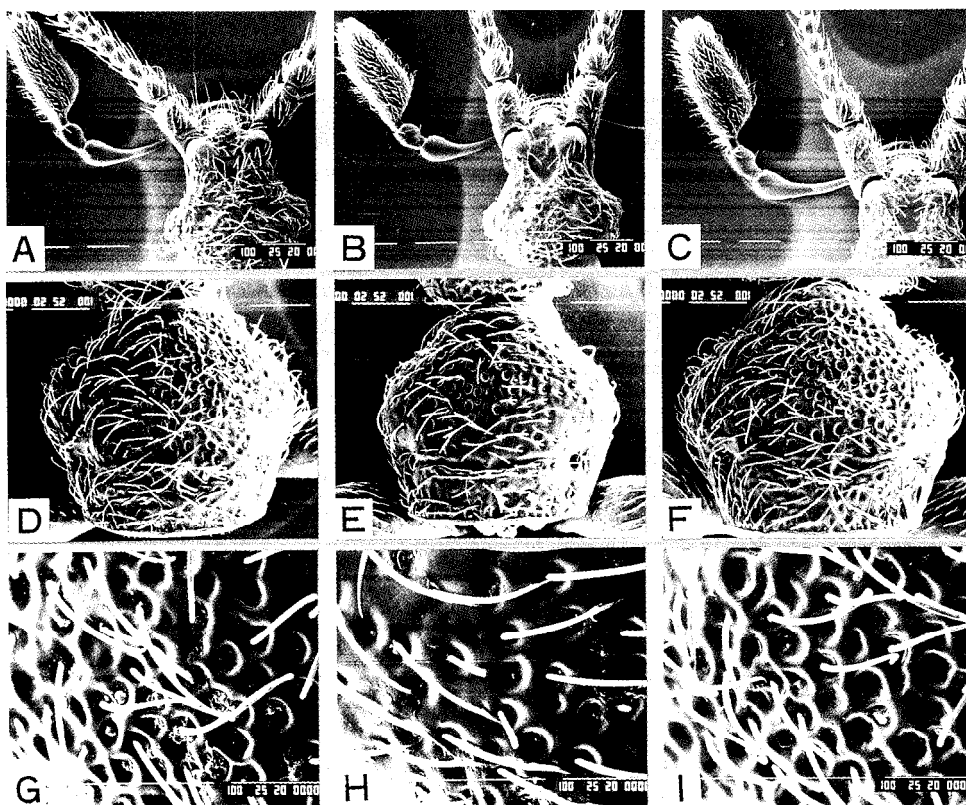


Fig. 2. A, D, G: *Bryaxis koltzei* Reitter, female of Cheju Is., Korea; B, E, H: *B. kintaro kinturo* sp. nov., female of Akita Pref.; C, F, I: *B. kintaro odaiensis* sp. et subsp. nov., female of Nara Pref. A-C: head; D-F: pronotum; G-I: ditto, enlarged.

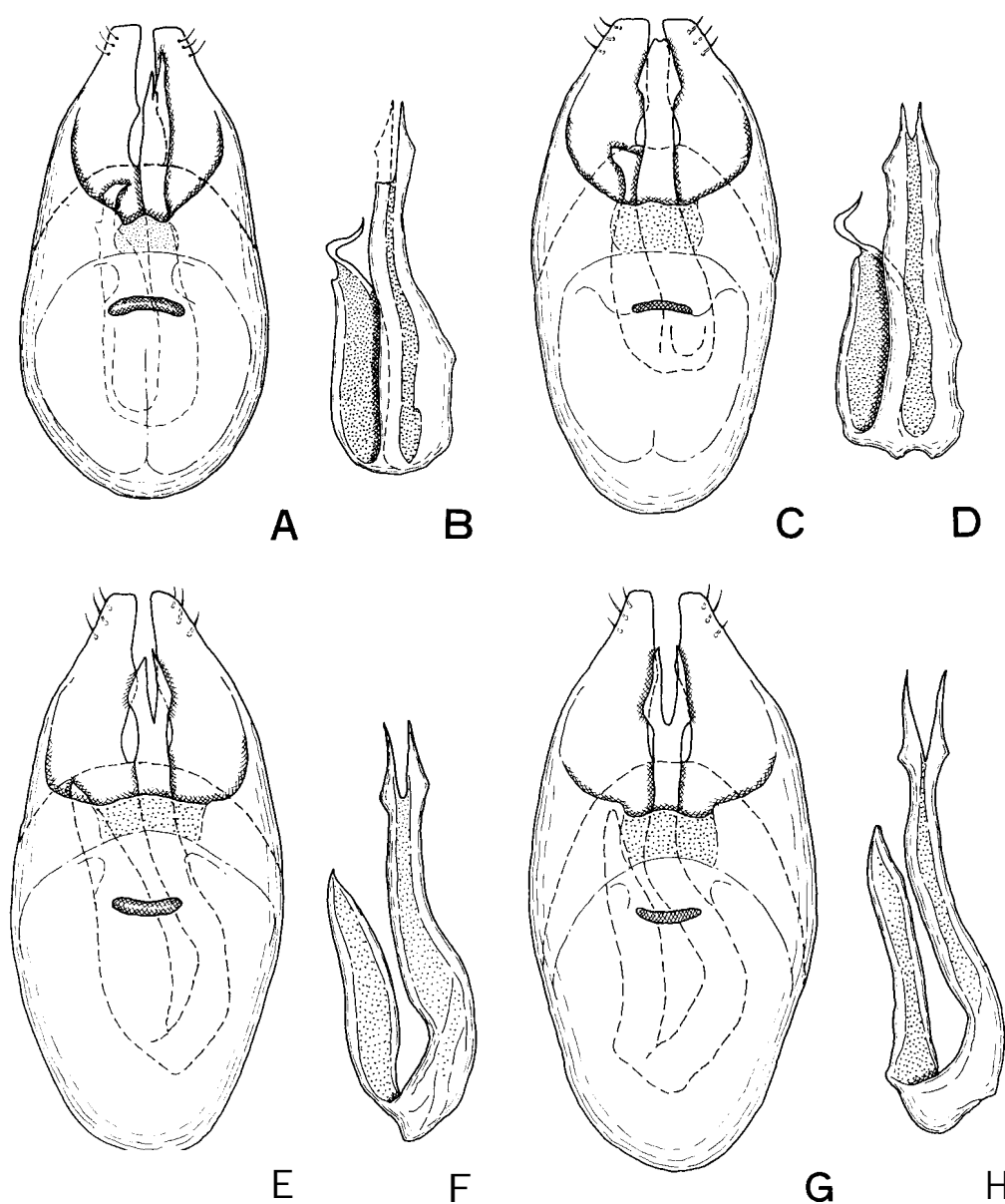


Fig. 3. A-B: *Bryaxis koltzei* Reitter of Ussuri, Russia; C-D: ditto, of Cheju Is., Korea; E-F: *B. kintaro kintaro* sp. nov. of Akita Pref.; G-H: *B. kintaro odaiensis* sp. et subsp. nov. of Nara Pref. A, C, E, G: aedeagus in ventral view; B, D, F, H: endophallus.

The species name is associated with the child hero “Kintaro” in the traditional Japanese folktale.

***Bryaxis kintaro odaensis* subsp. nov.**

Heteromorphous male (Fig. 1). Length 1.9-2.0 mm. Width 0.8 mm. Very close to the nominotypical subspecies, but differs by having the following characters: body larger, pronotum about as long as wide, densely covered with coarse punctures and rugose.

Homomorphous male. Unknown.

Female. Body length 1.8-1.9 mm, width 0.8 mm. Similar to male, but 1st antennal segment slender, pronotum wider than long, fore tibiae slender, without emargination.

Distribution. Japan: Honshu (Kinki district).

Holotype, male (Type No. 2995, Kyushu Univ.), Mt. Odaigahara, Nara Pref., 30. v. 1985, S. Nomura leg. Paratypes, 3 heteropterous males, 11 females, same data as holotype.

Remarks. This subspecies is very similar to the nominotypical subspecies in the general aspects and the structure of the male genitalia, but, the body is larger and the pronotum is rugose in both sexes.

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